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(54) Title: METHOD FOR PRODUCING TETRAFLUOROSILANE

(57) **Abstract:** The invention relates to a method for producing tetrafluorosilane by decomposing hexafluorosilicic acid with sulfuric acid, which comprises: step 1 of decomposing hexafluorosilicic acid in concentrated sulfuric acid in the first reactor to give SiF_4 and HF and taking out the SiF_4; step 2 of transferring part of the concentrated sulfuric acid solution of step 1 containing HF into the second reactor to react the HF with silicon dioxide fed thereinto, thereby producing SiF_4 containing $(SiF_3)_2O$; and step 3 of bringing the reaction product of step 2 containing $(SiF_3)_2O$ and SiF_4 to the first reactor to react $(SiF_3)_2O$ contained in the reaction product with HF to convert it into SiF_4 and then taking out the SiF4 along with SiF_4 formed in step 1. According to the invention, high-purity SiF_4 can be obtained with $(SiF_3)_2O$being reduced, free from HF generated as a problematic side product in conventional method.

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